

A clean version of claim 2 is presented:

a3
5/6
cmx

CLAIM 2. (amended) The worm/worm gear assembly of claim 1 wherein each of said teeth of the worm includes a first flank surface and an opposing second flank surface, and wherein each of said teeth of said worm gear includes a first flank surface and an opposing second flank surface, said outboard mechanical double flank communication being maintained such that contact is made between said first flank surface of at least one of said teeth of said worm and said first flank surface of at least one of said teeth of said worm gear, and such that contact is made between said opposing second flank surface of said at least one of said teeth of said worm and a flank surface facing said first flank surface of said at least one tooth of said worm gear on a successive tooth of said worm gear.

A clean version of claim 11 is presented:

a4
5/6
cmx

CLAIM 11. (amended) The worm/worm gear assembly of claim 1 wherein at least one of said worm and said worm gear are fabricated from a resilient material.

A clean version of claim 20 is presented:

a5
5/6
cmx

CLAIM 20. (amended) The worm/worm gear assembly of claim 12 wherein at least one of said worm and said worm gear are fabricated from a resilient material.

A clean version of claim 26 is presented:

a6
5/6
cmx

CLAIM 26. (amended) A single part gear capable of reducing backlash, comprising: a plurality of teeth disposed on an outer edge thereof, each tooth of said plurality of teeth having two arcuately-formed flank surfaces, said flank surfaces being arcuately-formed across a width of each tooth of said gear, and said gear being efficiently operable under load conditions.

A clean version of claim 32 is presented:

a7 CLAIM 32. (amended)

An operable worm gear efficient at no- or low-load conditions and at higher load conditions such that double flank meshing contact is maintained between said operable worm gear and a worm to eliminate backlash between said operable worm gear and said worm, said operable worm gear comprising:

a body portion; and

a plurality of teeth disposed on said body portion, said plurality of teeth being formed of a resilient material.

A clean version of claim 37 is presented:

a8 CLAIM 37. (amended)

The operable worm gear of claim 36 wherein said spring rate is variably dependent upon at least one of a helical angle of a helical thread forming said plurality of teeth and the concavity of each of said teeth of said plurality of teeth.

A clean version of claim 39 is presented:

a9 CLAIM 39. (amended)

A worm/worm gear assembly, comprising:
a worm having at least one helical tooth; and
a flexible helical cut worm gear, in double flank contact with said worm, and wherein a helix angle of said worm helical tooth is less than a helix angle of said helical cut worm gear.

A clean version of claim 40 is presented:

a10 CLAIM 40. (amended)

A method of delashing a gear system, comprising:
disposing a worm in compressive mechanical communication with a worm gear; and
maintaining double flank contact at opposing edges of facing successive worm gear teeth such that during low- or no-load conditions, said double flank contact is maintained between teeth of said worm and said worm gear at outer edges of each of said facing successive worm gear teeth and during higher load conditions said double flank contact extends toward the center of each of said facing successive worm gear teeth.

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A clean version of claim 41 is presented:

CLAIM 41. (amended) The method of claim 40 wherein said disposing of said worm in compressive mechanical communication with said worm gear comprises biasing said worm and said worm gear together.

All Cont

A clean version of claim 43 is presented:

CLAIM 43. (amended) The method of claim 41 further comprising skewing a helix angle of said worm gear.

All Cont

A clean version of claim 44 is presented:

CLAIM 44. (amended) The method of claim 41 further comprising skewing an axis of said worm gear relative to an axis of said worm.

Please add the following new claims:

CLAIM 45. (new) A worm/worm gear assembly, comprising:
a worm having a plurality of teeth defined by at least one thread disposed thereon, each of said teeth of the worm including a first flank surface and an opposing second flank surface, said flank surfaces of each of said teeth of said worm being convexly arcuately formed; and

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a single part worm gear having a plurality of uninterrupted teeth flexibly disposed thereon, each of said teeth of said worm gear including a first flank surface and an opposing second flank surface, said flank surfaces being concavely arcuately formed to receive said convexly arcuately formed flank surfaces of said teeth of said worm, and said teeth of said worm gear being disposed in outboard mechanical double flank communication with said teeth of said worm.

CLAIM 46. (new) A worm/worm gear assembly, comprising:
a worm having a plurality of teeth defined by at least one thread disposed thereon, each of said teeth of said worm including a first flank surface and an opposing second flank surface, wherein said flank surfaces of each of said teeth of said worm are convexly arcuately formed; and

a single part worm gear having a plurality of uninterrupted teeth flexibly disposed thereon, said teeth of said worm gear being disposed in outboard mechanical double flank communication with said teeth of said worm, each of said teeth of said worm gear including a first flank surface and an opposing second flank surface, said flank surfaces of said worm gear being concavely arcuately formed, said mechanical communication being maintained such that contact between said teeth of said worm and said worm gear is maintained at opposing outer edges of said teeth and extends to a point intermediate said opposing outer edges of said teeth.